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2631  
PATENT  
83361.0002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED  
MAR 21 2002  
Technology Center 2600

re application of:  
Ahmed Eltawil, et al.  
Serial No: 10/057,430  
Filed: January 25, 2002  
For: UNIVERSAL RAKE RECEIVER

Art Unit: 2631  
Examiner: Not Assigned

**TRANSMITTAL OF INFORMATION  
DISCLOSURE STATEMENT**

Commissioner for Patents  
Washington, D.C. 20231

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:	
Commissioner for Patents Washington D.C. 20231, on March 7, 2002	
Date of Deposit	
William H. Wright, Reg. No. 36,312	
Name	
	3/7/02
Signature	Date

Dear Sirs:

- ☒ The information disclosure statement submitted herewith is being filed within three months of the filing date of the application other than a continued prosecution application, or within three months of the date of entry into the national stage of an international application, or before the mailing date of a first Office Action on the merits, or before the mailing of a first Office action after the filing of a request for continued examination under §1.114, whichever event occurs last. 37 C.F.R. §1.97(b).
- ☐ The information disclosure statement transmitted herewith is being filed *after* the period specified in §1.97(b), but *before* the mailing date of a final action under §1.113, or a notice of allowance under §1.311, or an action that otherwise closes prosecution in the application, whichever occurs first. A statement specified in §1.97(e) or a fee set forth in §1.17(p) is included. 37 C.F.R. §1.97(c).

**§1.97(e) STATEMENT**

I, the person signing below, state:

☐ that each item of information contained in the information disclosure statement was first cited in the attached communication from a foreign patent office in a counterpart foreign application and that the communication is dated not more than three months prior to the filing of the statement. 37 C.F.R. §1.97(e)(1).

OR

☐ that no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in §1.56(c) more than three months prior to the filing of the statement. 37 C.F.R. §1.97(e)(2).

**OR FEE**

- ☐ Attached is a fee set forth in 37 C.F.R. §1.17(p) for submission of an information disclosure statement under §1.97(c). (\$180.00). [OR:] Please charge the fee set forth in 37 C.F.R. §1.17(p) for submission of an information disclosure statement under §1.97(c) (\$180.00) to Deposit Account No. 50-1314. A copy of this petition is enclosed.
3. ☐ The information disclosure statement transmitted herewith is being filed *after* the period specified in §1.97(c), but before, or simultaneously with the payment of the issue fee. A statement specified in §1.97(e) and a fee set forth in §1.17(p) are included. 37 C.F.R. §1.97(d).

**§1.97(e) STATEMENT**

I, the person signing below, state:

- ☐ that each item of information contained in the information disclosure statement was first cited in the attached communication from a foreign patent office in a counterpart foreign application and that the communication is dated not more than three months prior to the filing of the statement. 37 C.F.R. §1.97(e)(1).

OR

- ☐ that no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in §1.56(c) more than three months prior to the filing of the statement. 37 C.F.R. §1.97(e)(2).

**AND FEE**

- ☐ Attached is a fee set forth in 37 C.F.R. §1.17(p) for submission of an information disclosure statement under §1.97(d). (\$180.00).
4. ☒ If it should be determined that for any reason either an insufficient fee or an excessive has been paid, please charge any insufficiency or credit any overpayment necessary to ensure consideration of the information disclosure statement for the above-identified application to Deposit Account No. 50-1314. **A copy of this petition is enclosed.**
5. ☒ A list of 25 reference(s) is in the enclosed Form PTO-1449.

**NON-ENGLISH LANGUAGE REFERENCES**

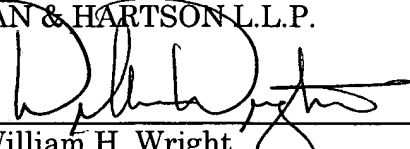
- ☐ Enclosed is a search report for a counterpart application. The search report Examiner has provided comments on the relevancy of any non-English language references cited in the search report.

- ☐ The specification incorporates comments on the relevancy of Non-English language references.
- ☐ Set forth below are comments provided by the applicant's home country counsel on the relevancy of non-English language references:

Date: March 7, 2002

Biltmore Tower  
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Respectfully submitted,  
HOGAN & HARTSON L.L.P.

By:   
William H. Wright  
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Attorney for Applicant(s)

# INFORMATION DISCLOSURE CITATION IN AN APPLICATION

(Use several sheets if necessary)

Applicant

Ahmed Eltawil, et al.

Filing Date

January 25, 2002

Group Art Unit

2631

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,109,390	04-28-92	Gilhousen, et al.			
	5,602,833	02-11-97	Zehavi			
	5,764,687	06-09-98	Easton			
	5,790,589	08-04-98	Hutchison, IV, et al.			
	5,903,550	05-11-99	Spock			
	6,229,839	05-08-01	Levin, et al.			
	6,310,869	10-30-01	Holtzman, et al.			

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Esmael H. Dinan, et al., "Spreading Codes for Direct Sequence CDMA and Wideband CDMA Cellular Networks," IEEE Communications Magazine, pp. 48-54, September 1998
	Erik G. Ström, et al., "Maximum Likelihood Synchronization of DS-CDMA Signals Transmitted Over Multipath Channels," Dept. of Signals and Systems, Communications System Group, Chalmers University of Technology, Göteborg, SWEDEN, pp. 1-5, prior to 2001
	Keith Onodera, et al., "A 75mW 128MHz DS-CDMA Baseband Correlator for High-Speed Wireless Applications," Dept. of Electrical Engineering and Computer Sciences, University of California, Berkeley, pp. 1-2, prior to 2001
	G.J.R. Povey, et al., "Simplified Matched Filter Receiver Designs for Spread Spectrum Communications Applications," Electronics & Communication Engineering Journal, pp. 59-64, April 1993
	Loke Kun Tan, et al., "A 200 MHz Quadrature Digital Synthesizer/Mixer in 0.8 $\mu$ m CMOS," IEEE Journal of Solid-State Circuits, Vol. 30, No. 3, pp. 193-200, March 1995
	Lars Erup, et al., "Interpolation in Digital Modems-Part II: Implementation and Performance," IEEE Transactions on Communications, Vol. 41, No. 6, pp. 998-1008, June 1993
	Floyd M. Gardner, "Interpolation in Digital Modems-Part I: Fundamentals," IEEE Transactions on Communications, Vol. 41, No. 3, pp. 501-507, March 1993

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

<b>FORM PTO-1449</b>  <b>INFORMATION DISCLOSURE CITATION IN AN APPLICATION</b>  (Use several sheets if necessary)	<b>Docket Number (Optional)</b> 83361.0002	<b>Application Number</b> 10/057,430
	<b>Applicant</b> Ahmed Eltawil, et al.	
	<b>Filing Date</b> January 25, 2002	<b>Group Art Unit</b> 2631

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### FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO

### OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Abdellatif Bellaouar, et al., "Low-Power Direct Digital Frequency Synthesis for Wireless Communications," IEEE Journal of Solid-State Circuits, Vol. 35, No. 3, pp. 385-390, March 2000
	Mao Yu, et al., "An Improved Correlator for CDMA Receivers," Applied Microwave & Wireless, pp. 28-34, prior to 2001.
	Henry T. Nicholas, III, et al., "The Optimization of Direct Digital Frequency Synthesizer Performance in the Presence of Finite Word Length Effects," 42 <sup>nd</sup> Annual Frequency Control Symposium, pp. 357-363, 1988
	D.P. Noel, et al., "Frequency Synthesis: A Comparison of Techniques," Department of Electronics, Carleton University, Ottawa, Ontario, Canada, pp. 535-538, prior to 2001.
	Sirote Ratanamahatana, et al., "Channel Estimation for Power Controlled 3G CDMA," IEEE, pp. 2429-2433, 2000.
	E. Del Re, et al., "Practical RAKE Receiver Architecture for the Downlink Communications in a DS-CDMA Mobile System," IEE Proc.-Commun., Vol. 145, No. 4, pp. 277-282, August 1998
	Xu Changlong, et al., "Performance Analysis of the RAKE Receiver of CDMA2000 Reverse Link," National Mobile Communications Research Laboratory of Southeast University, China, pp. 578-581, prior to 2001.
	Massimiliano Martone, "Blind Adaptive Detection DS/CDMA Signals on Time-Varying Multipath Channels with Antenna Arrays Using High-Order Statistics," IEEE Transactions on Communications, Vol. 48, No. 9, pp. 1590-1600, September 2000
	Bernard Sklar, "Rayleigh Fading Channels in Mobile Digital Communication Systems Part I: Characterization," IEEE Communications Magazine, pp. 90-100, July 1997
	Bernard Sklar, "Rayleigh Fading Channels in Mobile Digital Communication Systems Part II: Mitigation," IEEE Communications Magazine, pp. 148-155, September 1997
	Ramjee Prasad, et al., "An Overview of CDMA Evolution Toward Wideband CDMA," IEEE Communications Surveys, <a href="http://www.comsoc.org/pubs/survey">http://www.comsoc.org/pubs/survey</a> , Vol. 1, No. 1, pp. 2-29, Fourth Quarter 1998

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